

FIG. 1

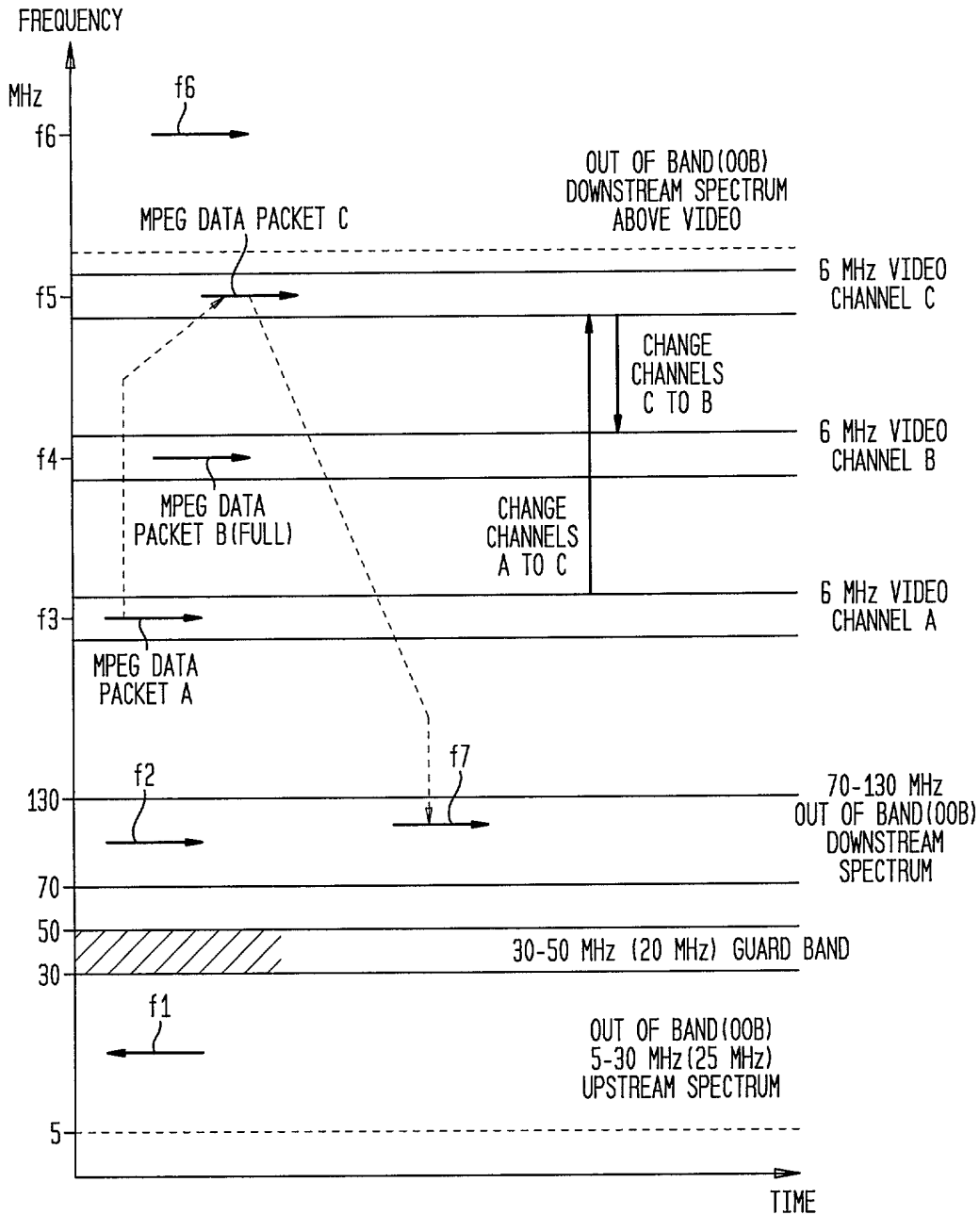


FIG. 2  
(PRIOR ART)

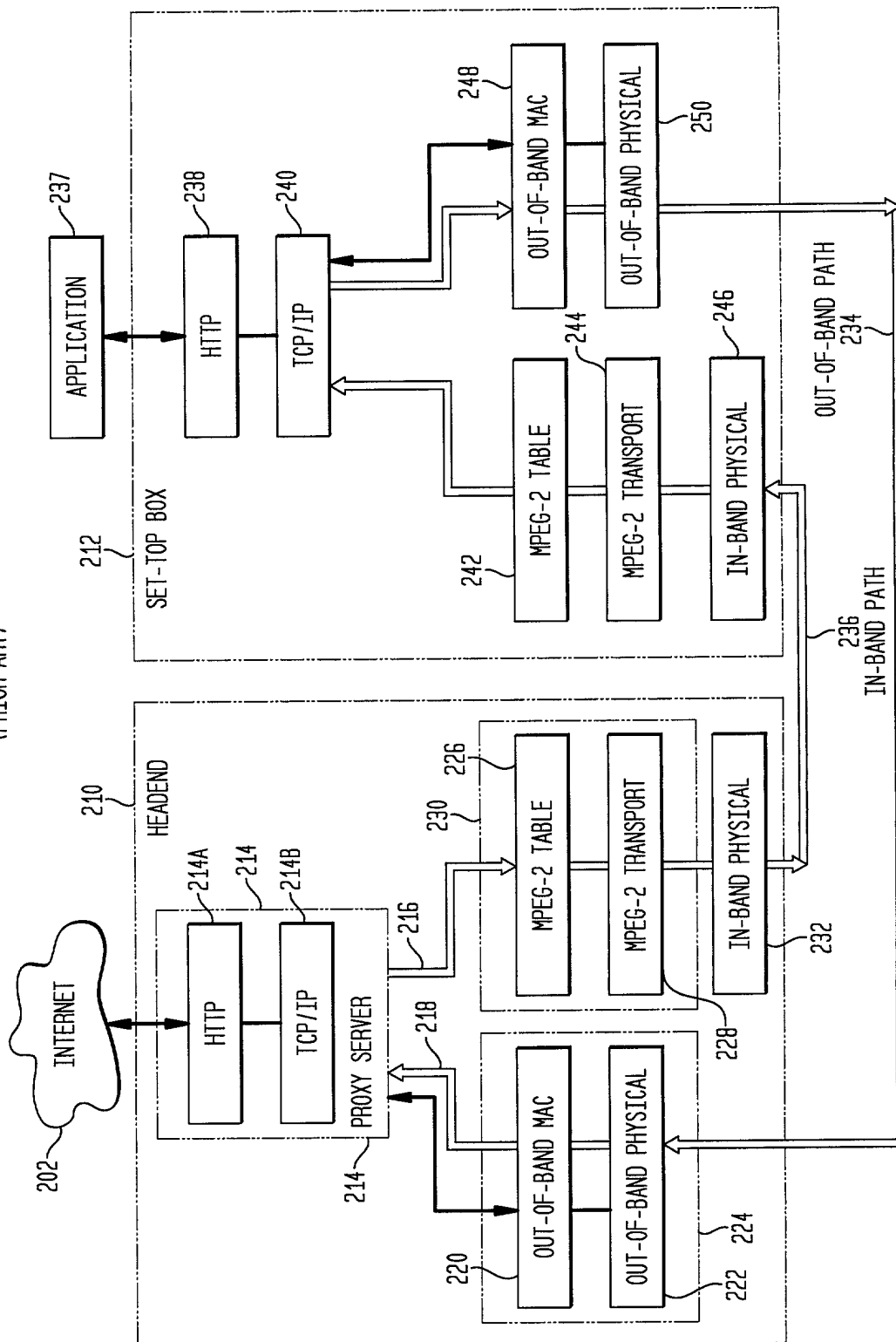


FIG. 3

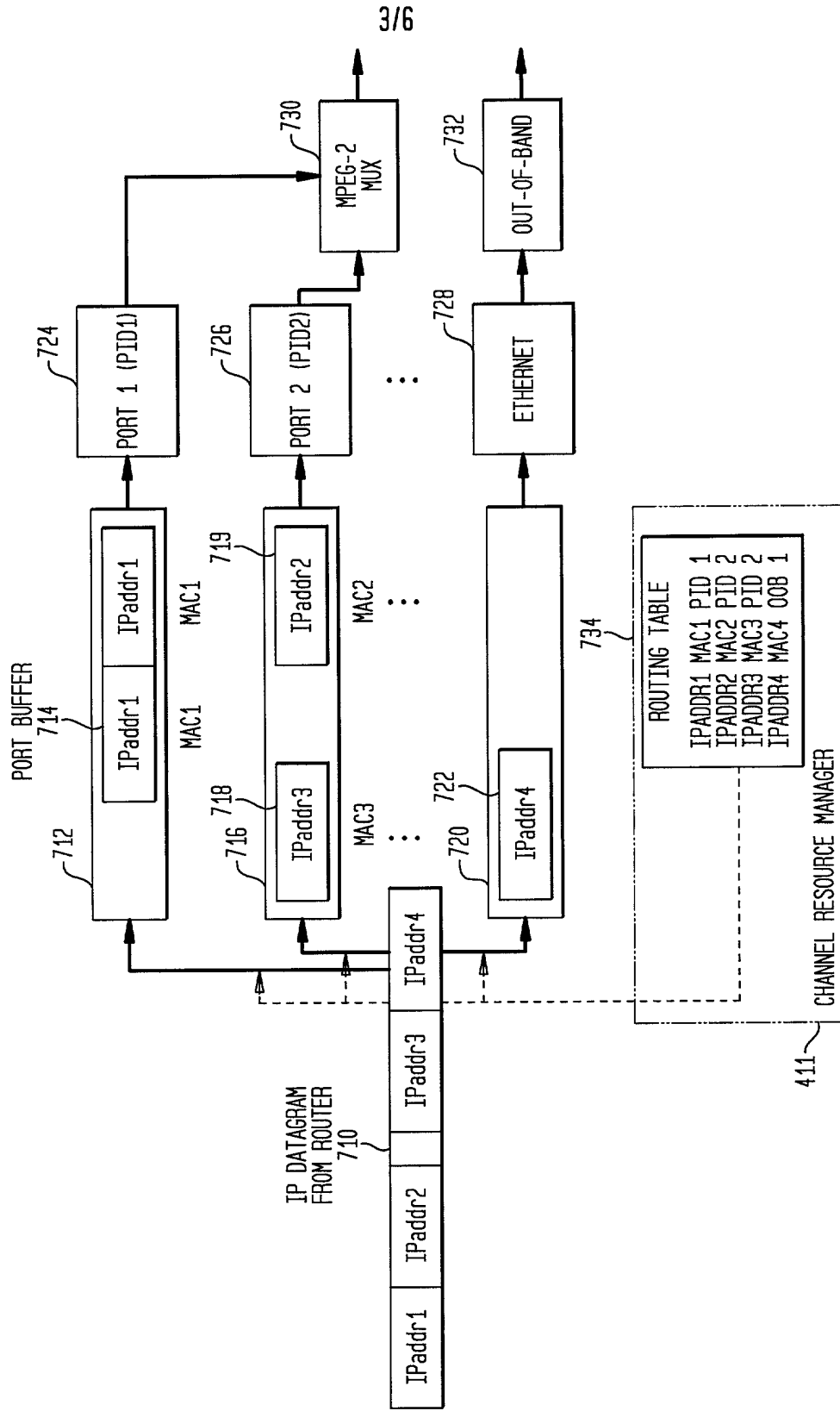
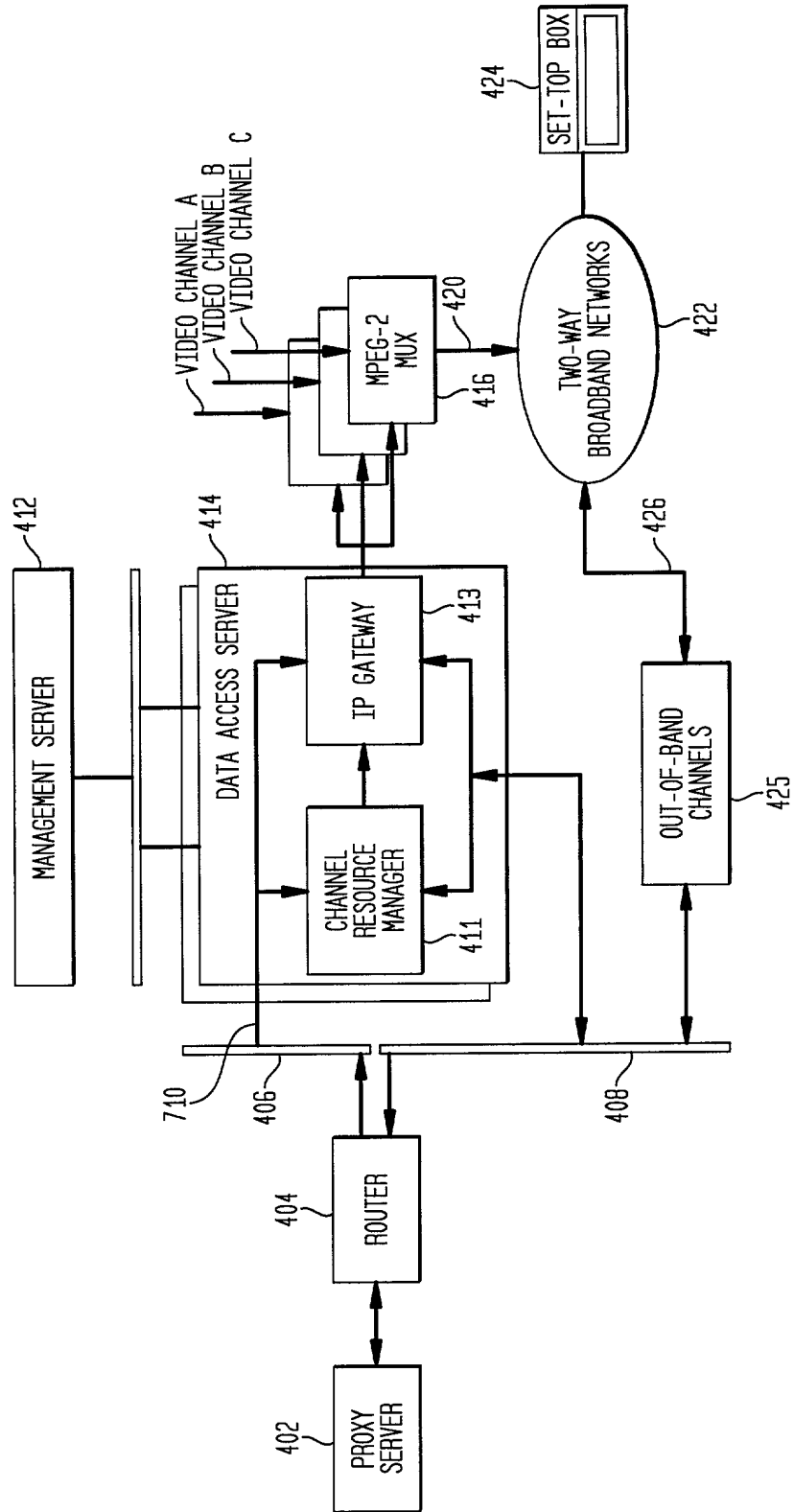
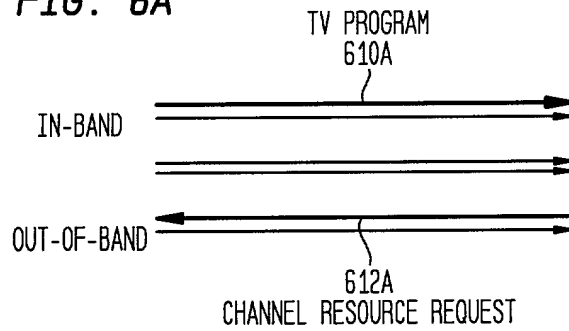


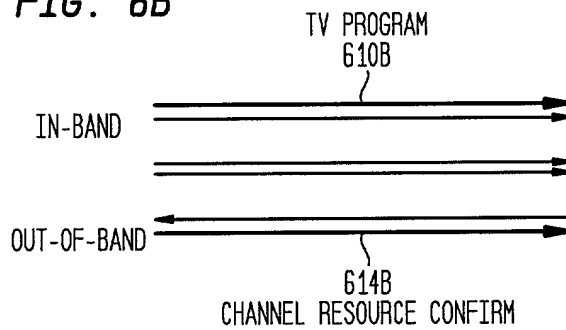
FIG. 4



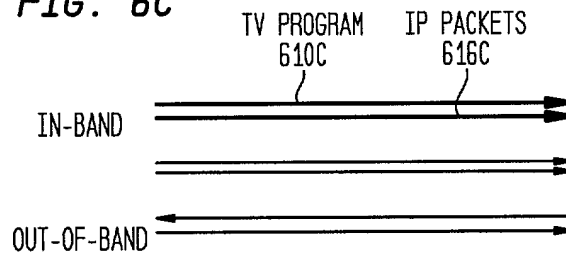


**FIG. 6A**

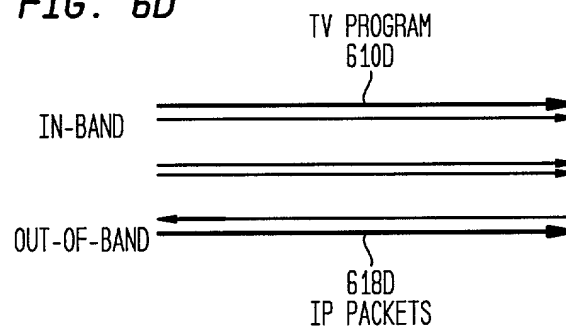
STEP 1 UPON CHANNEL CHANGE AND IP TRAFFIC STB SENDS CHANNEL RESOURCE REQUEST USING OOB UPSTREAM

**FIG. 6B**

STEP 2 SERVER SENDS CHANNEL RESOURCE CONFIRM USING OOB DOWNSTREAM

**FIG. 6C**

STEP 3 SERVER ROUTES THE IP PACKETS TO THE RIGHT IN-BAND TRANSPORT

**FIG. 6D**

STEP 4 SERVER CAN ALSO ROUTES THE IP PACKET TO THE OOB DOWNSTREAM

**TABLE 1**  
CHANNEL RESOURCE REQUEST MESSAGES

Channel Resource Request Message(){		
commonDescriptorHeader(){		
resourceRequestID	2	STB assigned ID for message
resourceDescriptorType	"0x0004"	PhysicalChannelResourceDescriptor
resourceNum	2	NOT USED
associationTag	2	NOT USED
resourceFlags	"0x42" (or "0x46")	Use only current channel "non-Negotiable" (Can use any channel "Negotiable")
resourceStatus	1	NOT USED
resourceLength	"0x0006"	Total length of the descriptor
resourceDataFieldCount	"0x0001"	Only one resource descriptor
}		
PhysicalChannelResourceDescriptor(){		
channelID	4	programID(2)+transport_streamID(2)
direction	"0x0000"	(downstream)
}		
}		

## TABLE 2

```

Channel Resource Confirm Message() {
    commonDescriptorHeader() {
        resourceRequestID
        resourceDescriptorType
        resourceNum
        associationTag
        resourceFlags

        resourceStatus
        resourceLength
        resourceDataFieldCount
    }

    MPEGProgramResourceDescriptor() {
        mpegProgramNum
        mpegPmtPid
        mpegCaPID
        elementaryStreamCount
        mpegPID
        stream_type
        reserved
        associationTag
        mpegPCR
    }
}

```